

reddot design award winner 2005

Linde

# Platform pallet truck Capacity 2000 and 2400 kg T 20 SP/AP, T 24 SP/AP SERIES 131

## Safety

Performance paired with safety. The sturdy steel cockpit enclosure keeps the operator safe from shock and impact throughout the working day. The skirt surrounding the platform prevents damage to the truck or injury to legs and feet by intrusion of other forked vehicles. At no time is the operator's body exposed beyond the contours of the truck.

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## Performance

Efficiency on the job is the Linde Platform Pallet Truck's true strength. Its performance is based on a powerful 3 kW AC motor and active castor wheels. Forceful acceleration, high travel speed and efficient brakes add up to productivity in service at any duty level.

## Comfort

The ergonomic 45°-angle driving position opens up entirely new perspectives by keeping the working environment in good view travelling either forwards or in reverse. A padded backrest provides added comfort. By helping to prevent operator fatigue it contributes to improved profitability.

## Reliability

Linde Material Handling

Rugged construction makes this a truck to rely on. Each fork tip supports a load of 2,000 kg without bending. Smooth entry of the forks into closed pallets is assisted by the ramped tip shape, lead-in and narrow width (165 mm). Features that contribute to considerably longer truck lifetime as well as fast, easy and safe load handling.

### Service

Speed and economy continue over into truck diagnosis and preventive maintenance. CAN bus connectivity enables all truck data to be read out on a laptop computer by the service technician. Swift access to all components and maintenance-free AC technology play an additional part in keeping truck uptime up.

# Technical data (According to VDI 2198)

	1.1	Manufacturer		LINDE	LINDE
	1.2	Model designation		T 20 SP	T24SP
	1.3	Power type		Battery	Battery
Characteristics	1.4	Control type		Stand-on	Stand-on
acter	1.5	Load capacity	Q (kg)	2000	2400
Chara		Load center		600	600
	1.6	Load distance (forks raised/lowered)	c (mm)		
			x (mm)	895/962	895/962
	1.9	Wheelbase (forks raised/lowered)	y (mm)	1359/14253)	1359/1425 3)
hts	2.1	Service weight (including battery as Line 6.5)	kg	800	800
Weights	2.2	Axle load with load, drive side/load side	kg	1125/1675	1211/1989
	2.3	Axle load without load, drive side/load side	kg	660/140	660/140
	3.1	Tyres (PU = Polyurethane, R = Solid rubber)		R + P/P	R + P/P
S	3.2	Tyre size, drive side	mm	ø 254 x 102	ø 254 x 102
Tyre	3.3	Tyre size, load side		ø 85 x 105	ø 85 x 105
Wheels/Tyres	3.4	Additional wheels (dimensions)	mm	Stabilizers ø 125 x 60	Stabilizers ø 125 x 60
Whe	3.5	Wheels, number drive side/load side (x = driven)		1x+2/2	1x+2/2
	3.6	Track width, drive side	mm	544	544
	3.7	Track width, load side	mm	355/395/515	355/395/515
	4.4	Lift	h3 (mm)	125	125
	4.8	Platform height (stand-on position)	h7 (mm)	160	160
	4.9	Control handle height, travel position, min/max	h14 (mm)	1160	1160
	4.15	Lowered fork height	h13 (mm)	85	85
	4.19	Overall length	1 (mm)	2274 <sup>3)</sup>	2274 <sup>3)</sup>
suc	4.20	Head length	l2 (mm)	11243)	11243)
Dimensions	4.21	Overall width	b1 (mm)	790	790
Dim	4.22	Fork dimensions	s/e/l (mm)	55 x 165 x 1150	55 x 165 x 1150
	4.25	Width across forks	b5 (mm)	520/560/680	520/560/680
	4.32	Ground clearance, center of wheelbase, min/max		30/155	30/155
	4.33	Aisle width, 1000 x 1200 pallet crosswise	Ast (mm)	2324 3)	2324 3)
	4.34	Aisle width, 800 x 1200 pallet lengthwise	Ast (mm)	2524 3)	2524 <sup>3)</sup>
	4.35	Turning radius (forks raised)	Wa (mm)	2019	2019
	5.1	Travel speed, with/without load	km/h	10.0/10.0	10.0/10.0
Performance	5.2	Lift speed, with/without load	m/s	0.036/0.043	0.027/0.034
	5.3	Lower speed, with/without load		0.064/0.060	0.065/0.060
	5.8	Gradeability with/without load	0/0	13/20	11/20
	5.10	Service brake		Electromagnetic	Electromagnetic
	6.1	Traction motor (60 minutes rating)	kW	3.0	3.0
Drive	6.2	Lift motor, 15 % on time		1	1.2
	6.3	Battery to DIN 43531/35/36 A, B, C, No		DIN 43535 B	DIN 43535B
	6.4	Battery voltage, nominal capacity 5 h rating	V/Ah	24/240	24/240
	6.5	Battery weight	kg	200	200
S	8.1	Drive controller		LAC-Controller	LAC-Controller
Others	8.4	Noise level at operator's ear	dB(A)	≤ 70	≤ 70
-				, 0	

Figures for standard truck version,

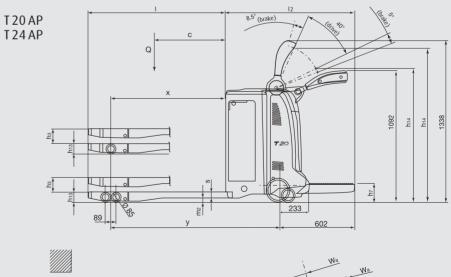
may vary according to equipment 1) Platform folded up 2) Platform folded down 3) With a 2 PZS vertical battery change or 3 PZS lateral (+ 100 mm for a 3 PZS vertical or 4 PZS lateral; + 150 mm for the 4 PZS vertical and + 225 mm for the 5 PZS vertical battery change or 3 PZS vertical battery c

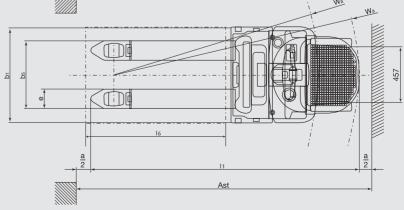
LINDE	LINDE
T 20 AP	T 24 AP
Battery	Battery
Stand-on	Stand-on
2000	2400
600	600
895/962	895/962
1359/14253)	1359/14253)
770	770
1095/1675	1181/1989
630/140	630/140
R + P/P	R + P/P
ø 254 x 102	ø 254 x 102
ø 85 x 105	ø 85 x 105
Stabilizers ø 125 x 60	Stabilizers ø 125 x 60
1x+2/2	1x + 2/2
544	544
355/395/515	355/395/515
125	125
160	160
1103/1287	1103/1287
85	85
2216 3)	2216 <sup>3)</sup>
697 <sup>1)</sup> /1066 <sup>2) 3)</sup>	697 <sup>1)</sup> /1066 <sup>2) 3)</sup>
790	790
55 x 165 x 1150	55 x 165 x 1150
520/560/680	520/560/680
30/155	30/155
1927 1)/2264 2) 3)	1927 <sup>1)</sup> /2264 <sup>2) 3)</sup>
2127 1)/2464 2) 3)	2127 1)/2464 2) 3)
1622 <sup>1)</sup> /1959 <sup>2)</sup>	1622 <sup>1)</sup> /1959 <sup>2)</sup>
10.0/10.0	10.0/10.0
0.036/0.043	0.027/0.034
0.064/0.060	0.065/0.060
13/20	11/20
Electromagnetic	Electromagnetic
3.0	3.0
1	1.2
DIN 43535B	DIN 43535 B
24/240	24/240
200	200
LAC-Controller	LAC-Controller
≤ 70	≤ 70
- / 0	- 70

12 T 20 SP T 24 SP Q 1207 h14 <u>ا</u>ً 2  $\tau_{a}$ ≞**†** 0 0 4 80 ° ĩ 89 661 Wa ä 16

> $AST = Wa - x + I_6 + a$ Safety clearance a = 200 mm

l1 Ast <u>a</u> 2





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# Equipment

## Standard equipment

Multifunction back lighted display Key switch or Log in Pin code: ignition Ideal 45° driving position (SP) Safe operator compartment with padded rests and cushioned full-suspension platform (SP) Dedicated work station (with storage compartments) One-hand Linde e-driver® control (SP) Power assisted steering with a proportional steering resistance Positive steering (drive wheel) feedback Self-centring steering (SP) Automatic speed reduction when cornering

AC motor				
Automatic braking				
Electromagnetic emergency brake acting proportionally to				
the load weight				
Cushion drive wheel				
Polyurethane active castor wheels				
Polyurethane single load wheels				
Foldable stand-on platform with side guards (AP)				
Horn				
Protection -10°C				

## **Optional equipments**

Alternative fork dimensions Drive wheels: polyurethane, cushion non-marking or wet grip Load wheels: Tandem polyurethane or single/tandem polyurethane greasable Clipboard Load backrest

Support for computer terminal or barcode reader (Pack 2) Pole+clipboard (Pack 1) Mobile and fixed battery stands (for side battery change) Cold store version -35°C

Other options available on request.

# Features

#### Total drive system

- → Electronically controlled hydraulicsuspension active castor wheels provide superb stability and traction when transporting pallet loads
- $\rightarrow$  Automatic braking on releasing the travel switch
- $\rightarrow$  Well controllable countercurrent braking
- $\rightarrow$  Electromagnetic braking initiated by the emergency stop button acts on the drive motor, proportional to the load carried



#### Ideal 45° driving position

- → Excellent view of environment driving in either forward or reverse direction
- → Utmost safety in every situation
- $\rightarrow$  Exceptional stability, especially when cornering

#### Linde e-driver®

- → Ergonomic control handle allows one-hand operation
- $\rightarrow$  Asymmetrical design leaves more room for first-level access
- → All main control functions integrated in one handle
- → Perfectly matched to 45° driving position

Batteries and chargers

or right

 $\rightarrow$  Vertical battery change as standard,

optionally side battery change left

 $\rightarrow$  Wide range of batteries from 250 Ah

(2 PzS) to 620 Ah (5 PzS)

 $\rightarrow$  Wide range of standard and

 $\rightarrow$  Battery locking system for side

change option secures battery

in compartment and eases the

wall-mount chargers

battery change

#### Workstation

- → Digital multifunction display
- $\rightarrow$  Truck access control by unique PIN code or by ignition key
- $\rightarrow$  Wide and deep storage compartments for wrapping paper, work gloves, writing utensils, etc.



### AC motor

- $\rightarrow$  Powerful, smooth-running motor, 3 kW (at 100 % performande)
- → Gradeability 13 %
- $\rightarrow$  No rollback on uphill starting
- $\rightarrow$  Top speed 10 km/h, loaded as unloaded
- → Forceful acceleration takes truck to top speed within 5 metres
- $\rightarrow$  Moisture- and dust-proof motor needs no maintenance



CAN bus connectivity

→ Electronic management of

 $\rightarrow$  All truck parameters can be

and easy diagnosis

components permitting quick

### Power steering for comfort and safety

- → Proportional power-assisted steering, self-centering and effortless to operate
- $\rightarrow$  Adjustable steering (drive wheel) feedback resulting in outstanding stability
- $\rightarrow$  Automatic speed reduction when cornering
- → Manoeuvering effort varies depending on the turning angle

Subject to change in the interests of progress. Illustrations and technical details non-binding. All dimensions subject to customary tolerance.

### Linde AG

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Linde Material Handling



configured by the service technician to achieve best performance in every application